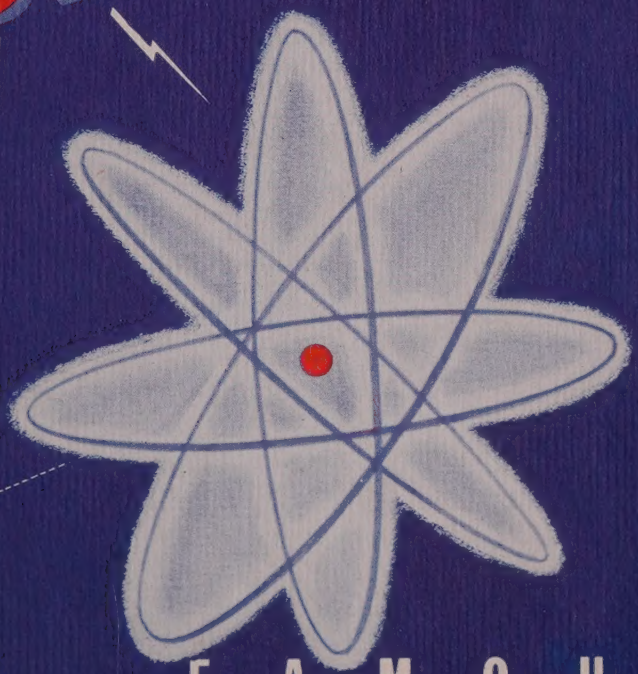
15560-L1

OPERATING INSTRUCTIONS

VACUUM TUBE TESTER

MODEL KS-15560-L1

HICKOK



WORLD FAMOUS

THE HICKOK ELECTRICAL INSTRUMENT COMPANY
10514 DUPONT AVENUE • CLEVELAND 8, OHIO
The Standard of Quality for Over 40 Years

OPERATING INSTRUCTIONS

FOR

MODEL KS-15560-L1

TRANSCONDUCTANCE TUBE TESTER

THE HICKOK ELECTRICAL INSTRUMENT COMPANY

10514 Dupont Ave.
Cleveland 8, Ohio

THE INSTRUMENT PACKED HEREWITH IS:

	PACKER'S CHECK
1 MODEL KS-15560-L1 VACUUM TUBE TESTER	
ACCESSORIES INCLUDED WITH THE TESTER ARE:	
1 - BOOKLET INSTRUCTIONS	
2 - GRID LEADS WITH CLIP	

SERIAL NO. _____

SIGNED: _____

INSTRUCTIONS FOR OPERATION OF MODEL KS-15560-L1

Read these instructions through before attempting to operate the tester.

1. There are two rectifier tubes, an 83 and a 5Y3 necessary to operate this tester. They are included.

The Short Lamp is a 1/4 watt, 110 volt, candelabra base neon signal lamp made by The General Electric Company. This lamp will last indefinitely unless broken.

The Fuse Lamp is a standard No.81, single contact auto bulb. This can be procured from any auto dealer or gasoline station attendant. This fuse lamp is in the primary circuit of the transformer.

2. Use on 60 cycles 110-125 volt circuit.

FUNCTIONS OF THE VARIOUS CONTROLS:

3. The line adjustment control rheostat in the KS-15560-L1 tester is connected with a small A.C. voltmeter as a constant calibration indicator which is normally always in circuit. The small A.C. voltmeter may also be used to register 60 cycles A.C. line voltage fed to the set by operating the test button P7 designated "LINE TEST" in the lower right part of the control panel. Reset the A.C. voltmeter to the red mark at 100 volts after depressing P4.

4. SELECTORS - The row of selector dials across the center of the control panel is for the purpose of conducting proper voltages to the tube's base pins. The operation of setting these dials is similar to DIALING A TELEPHONE NUMBER. On the roll data chart, below the word SELECTORS, appear the dialing numbers. These dialing numbers consist of two letters and five figures. Example: JR-6237-5. Starting at the left, the first dial is turned until the letter "J" appears through the window. The second dial is turned until "R" appears. The third dial indicates 6; the fourth, 2; the fifth, 3; the sixth, 7 and the seventh, 5.

The lettered dials control the filament or heater connections. The numbered dials control the GRID, PLATE, SCREEN, CATHODE and SUPPRESSOR in that order. In the example given above the heater terminals are connected to pins 8 and 1. The GRID is connected to pin 6; PLATE, to pin 2; SCREEN, to pin 3; CATHODE, to pin 7 and SUPPRESSOR, to pin 5.

These dial switches are electrically interlocked in such a way that it is impossible to connect two different voltage elements to the same pin. Thus accidental shorts are avoided.

The dialing system is designed so that a minimum of dial setting is required. For example, the heater setting is practically always JR so that these two dials seldom need resetting. It will also be noticed that when testing duo-diode triode tubes the amount of dialing has been reduced to a minimum.

The KS-15560-L1 set also provides a cathode activity test circuit controlled by the toggle switch designated "CATH. ACT" with a "NORM." position and a "TEST" position. In the "TEST" position the filament voltage of a tube is reduced by 10 percent of its Normal Value.

5. SHORT TEST - Turning the SHORTS switch successively through the positions 1-2-3-4-5 connects the various pairs of elements in turn across the test voltage. Tubes having shorted elements will complete the circuit and cause the neon SHORT lamp to glow. Tubes may be tested for shorts, either hot or cold.

A short is indicated by a steady glow of the neon lamp in certain positions of the SHORTS switch. A momentary flash of the lamp as the switch is turned from one position to another should be disregarded. This flashing is caused by the charging of a capacitor in the test circuit. A shorted tube should be discarded without further test.

6. LOCATING SHORTED ELEMENTS - In the following table (X) under any SHORT switch position indicates that the neon lamp glows in that position.

KIND OF SHORT	1	2	3	4	5
FIL -- CATHODE			X		
FIL -- GRID	X	X			X
FIL -- PLATE	X	X		X	X
FIL -- SCREEN	X		X	X	X
FIL -- SUP		X			
GRID -- CATHODE	X	X	X		X
GRID -- PLATE				X	
GRID -- SCREEN		X	X	X	
GRID -- SUP	X				X
PLATE -- SCREEN		X	X		
PLATE -- SUP	X			X	X
SCREEN -- SUP	X	X	X	X	X

7. NOISE TEST - The short test circuit is also used in making noise tests on vacuum tubes. Connections are made from the noise test jacks to the antenna and ground posts of any radio receiver. The tube under test is tapped with the finger as the SHORTS switch is turned through positions 1-2-3-4-5.

Intermittent disturbances which are too brief to register on the neon lamp will be reproduced by the loud speaker as static.

8. GAS TEST - Gas current in a tube or grid leakage current due to poor grid to filament insulation may be detected by the switch insertion of the Micromhos Meter into the grid circuit of a tube under test. In this setup the normal plate and screen grid voltages are applied by means of the P4 pushbutton switch. This test is made with the standard normal grid bias applied with the usual setting of the BIAS ADJUST dial as for a regular transconductance measurement. In addition, the gas test P5 Push Switch is operated which transfers the DC Micromhos Meter from its normal plate circuit position directly into the control grid circuit to measure grid current, if any, directly in DC microamperes. The "SIG. OFF" P6 switch also is simultaneously operated with the P5 switch to remove the grid signal for the test, for the presence of a grid signal could, in certain cases, produce false readings. In this test the Micromhos Meter, used as a DC Microammeter, is poled conventionally in series in the grid circuit, i.e., negative side to grid, so that for the majority of grid current detection tests where the grid current is "reversed", the Slide Switch designated "METER" under the Micromhos Meter must also be operated to its REVERSE position. Under the test conditions just described the Micromhos Meter will read 3-1/3 microamperes per small scale division.

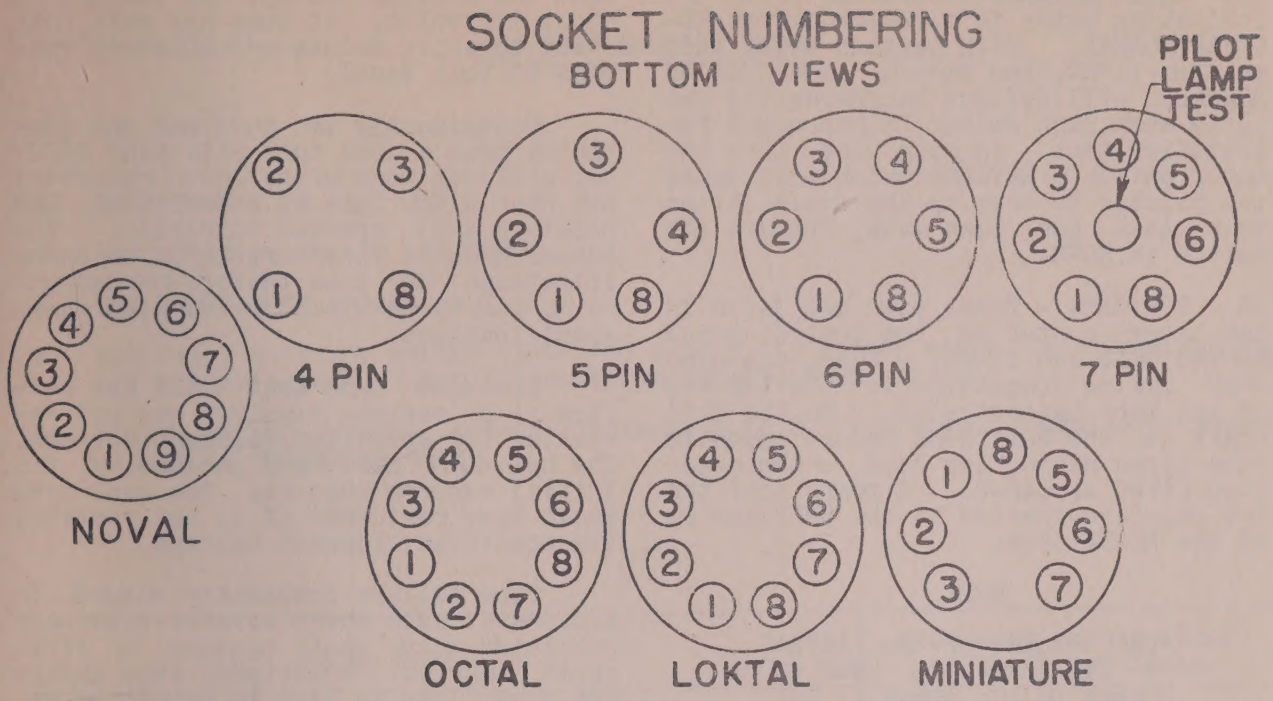
9. DYNAMIC TRANSCONDUCTANCE - The Push Switch P4 is mechanically divided into two sections, non-locking and locking. Both sections perform identical electrical functions. If momentary contact is needed press the non-locking button. If extensive tests are to be made use the locking button. The locking button is released by pressing the non-locking button.

The indicating meter will register the tube's value in seven ranges: 3000, 6000, 15000 Micromhos with HIGH Signal; 60,000, 30,000, 15,000, 6,000 Micromhos with LOW Signal. A "SHUNT" range is also provided to be used when checking Diodes and Rectifier tubes.

The Micromho switch automatically changes the signal from HIGH to LOW, when the appropriate setting is made.

On the roll chart following "SELECTORS" is a column designated "BIAS VOLTS". This is the negative grid bias to be applied to the tube being tested. The voltage is read on the small grid bias voltmeter in the upper left of the control panel. Bias voltage is read in two ranges, 0-5 and 0-50 D.C. volts. Make final adjustment after pressing P4 switch.

Directly above the grid bias voltmeter are two binding posts which are normally shorted by an attached bar. These posts are marked SELF BIAS + (pos.) and - (neg.). They provide means for



inserting a self biasing resistor into the cathode circuit of the tube being tested. These posts are bridged, within the tester, by a 2000 mfd capacitor. When using self bias set the normal bias to zero volts.

NOTE

A suitable low resistance D.C.milliammeter connected between these posts will measure the total cathode current.

The Micromho values printed on the data roll are minimum values. A satisfactory tube should read above the value given on the chart.

10. RECTIFIER TEST - The push switches P1, P2 and P3 are used to test various types of rectifier elements.

a. The push switch P1 is used when testing detector diodes. It applies a low voltage which will not injure the delicate cathode. Good diodes will cause the meter pointer to read above the mark, DIODES OK. P1 also reduces the screen voltage to 1/2 normal value. Instructions for its use appear in Notations column of the data chart.

b. Push switch P2 is used when testing cold cathode rectifiers such as the 0Z4. This applies a voltage sufficiently high to ionize the tube and start conduction. Good tubes will read above the scale mark "RECTIFIERS OK."

c. Push switch P3 is used when testing ordinary rectifier tubes such as the 5Y3. This switch applies a medium voltage which is best adapted to reveal defects in this type of tube. Good tubes will read above the scale mark "RECTIFIERS OK."

11. SOCKET NUMBERING - In order to reduce dialing to a minimum, the sockets in the Model KS-15560-L1 Tube Tester are numbered as shown above. The numerical values of the lettered dials are as follows:

0	A	P
1	B	R
2	C	S
3	D	T
4	E	U
5	F	V
6	G	W
7	H	X
8	J	Y
9	K	Z

The letter "I" was omitted because of its resemblance to the figure "1". The letter "Q" was omitted because of its resemblance to the figure "0".

12. METER REVERSE - Directly below the indicating meter is a switch marked REVERSE-NORMAL. With certain tubes such as the 117N7, the meter, when set on NORMAL, will deflect backwards (to the left) when push switch P3 is pressed for rectifier test. In such case, turn the meter switch to REVERSE which will cause the pointer to move up the scale. After this test has been made, return the switch to NORMAL.

13. TOP CAPS - There are two jacks in the upper center of the control panel marked GRID and PLATE. These are used when making connection to the top cap of the tube being tested. On the data chart in the NOTATIONS column opposite tube types having top caps, is the notation CAP=G or CAP=P. G means that the top cap is connected to the GRID and P, to the PLATE jack.

NOTE

The center of the large 7-pin socket is used to check pilot lamps. Set the filament selector switches on JR. Set the filament voltage switch to the proper voltage for the lamp being tested.

14. SPECIAL NOTES - Power line voltage varies with different localities. It may also vary with the different hours of the day.

While a national survey indicates that the average voltage for the USA is about 117 volts, it does not mean that every locality maintains a constant voltage at that level.

Occasionally we have had the complaint that a used tube will test GOOD, but will not work in the radio receiver; but when a NEW tube is substituted, the receiver will operate correctly. The answer is this: Tubes are built to specifications. Our tube testers are designed to test tubes in conformity with these specifications.

The used tube that would not perform in a certain receiver was not receiving its specified filament voltage. The new tube performed because of its initial reserve capacity. The used tube would have performed if it had received its specified filament voltage.

Tube failure frequently occurs in A.C.--D.C. sets where several tubes are connected with their heaters or filaments in series. Sometimes, even though the power line voltage is normal, a series tube with abnormally high filament resistance will rob its companion tube of its normal filament voltage. The robbed tube apparently fails; but when tested under specified conditions, the tube will test GOOD.

15. MATCHING TUBES -The Model KS-15560-L1 is valuable in matching tubes for pushpull stages and other applications where matched tubes are essential.

TO TEST BALLAST TUBES

1. Turn Tester on.
2. Set filament switch to BLST.
3. Set SHORT TEST switch on 1.
4. Set first selector switch (lettered A to K) to letter shown in column marked (first selector) -- Set all numbered selectors on zero --
5. ROTATE second selector switch (lettered P to Z) from P to Z. NEON LAMP SHOULD LIGHT IN POSITIONS NOTED.

TUBE TYPE	First Selector	Neon lamp should light in these positions.						
1A1-1B1-1C1-1E1-1F1-1G1-1J1-1K1-1L1-1N1-1P1-1Q1-1R1G-1S1G-1T1G-1U1G-1V1-1Y1-1Z1-2	J	R						
2UR224	J			T				X
2LR212	H	R	S		U			
3	J	R						
03G	J			T				
4-5	J	R						
6-133	J			T				
6-6AA	J	R						
7-8-9	J	R						
10A-10AG	J			T				
10AB	J			T				X
K17B-M17C-BM17C	J			T				X
M17HG-M17H	J		S					X
	D	R						
K23B-K23C-KX23B-KX30C	J			T				X
M30H	J		S					X
	D	R						
30A-K30A	J			T				
K30D	J	R		T				X
33A-33AG	J			T				
K34B	J			T				X

TUBE TYPE	First Selector	Neon lamp should light in these positions.						
36A	J			T				
K36B-BK36B-L36B-BM-L36C-KX36C	J			T				X
KX36A	J	R						
36D-L36D	J	R		T				X
L36DJ	J	R		T	U			X
K36H-M36H-M36HG	J		S					X
	D	R						
L40S1-L40S2	J	R		T		V		
42A	J			T				
42A1	H				U			
42A2-42B2	H		S		U			
K42B-L42B-M42B-KX42B-LX42B-L42BX-K42C-L42C-M42C	J			T				X
KB42D-K42D-L42D	J	R		T				X
LX42D-L42DX	J	R	S	T				
K42E-L42E	J			T				X
L42F	J							X
	D	R						
42HA-K42HJ-M42H-M42HG	J		S					X
	E	R		T				
KX42C	J			T				X
L42S1	J	R		T		V		
49A-49AJ-K49AJ	J			T				
KX49A	J			T				X
49A1	H				U			
49A2-49B2	H		S		U			
K49B-L49B-M49B-BM49B-K49C-M49C-BM49C-BK49C-K49E-L49E	J			T				X
K49D-BK49D-L49D	J			T				X
L49F	J							X
	D	R						
M49H-M49HG	J		S					X
	D	R						
KZ49B-KZ49C	J	R				V		
K49BJ-L49BJ	J			T	U			X
L49S2	J	R		T		V		
49AJ-K49AJ	J			T				
KX49B-LX49B-LX49C	J			T				X
L49DJ	J	R		T	U			X
L49S3	J	R		T		V		
50A2	J	R		T				
50A2MG-50B2	J	R				V		
50X3	J	R						
K52H-M52H	J		S					X
	D	R						

TUBE TYPE	First Selector	Neon lamp should light in these positions.						
K54B	J			T				X
55A-K55A	J			T				
55A1	H				U			
KX55A	J	R						
55B-K55B-M55B-BM55B-L55BG-LX55B	J			T				X
55A2-55B2	H		S		U			
K55C-L55C-KX55C	J			T				X
K55CP	J			T		V		X
K55D-L55D	J	R		T				X
L55E-M55E	J			T				X
L55F-M55F-BL55F	J							X
	D	R						
K55H-M55H-M55HG	J		S					X
	D	R						
L55S1-L55S2	J	R		T		V		X
60R30C	J	R		T				
64.23	J			T				
67A	J			T				
K67B-L67B	J			T				X
L73B-K74B-L74B-CX74C	J			T				X
80A	J			T				
K79B-K80B-M80B-K80C-KX80B-L80B	J			T				X
K80F	J							X
	D	R						
KX87B-LX87B-L90B	J			T				X
K90F-M90F-K92F-M92F	J							X
	D	R						
92A	J			T				
L92B-95K2	J			T				X
L99D	J	R		T				X
100R8	J			T				X
120R	J	R						
120RS-135K1	J			T				X
135K1A	J			T	U			X
140L4-140L8-140R4-140R8	J	R		T				
140R	J	R						
140L44-140R44	J	R	S	T				
165L4-165R4-165R8	J	R		T				
165R	J	R						
165L44-165R44	J	R	S	T				
185L4-185L8-185R4-185R8	J	R		T				
185R	J	R						
185L44-185R44	J	R	S	T				
200R-250R	J	R						
250R8-290L4	J			T				X
300R4-320R4	J			T				X
340	J	R						
808-1	J			T	U			X
E14980-W43357-W4588-3613	J			T				X
3334-3334A	J	R		T				X
8593-8598-8601-8664	J			T				X
3ER248	J	R		T	U			X
3CR241	J	R		T				X

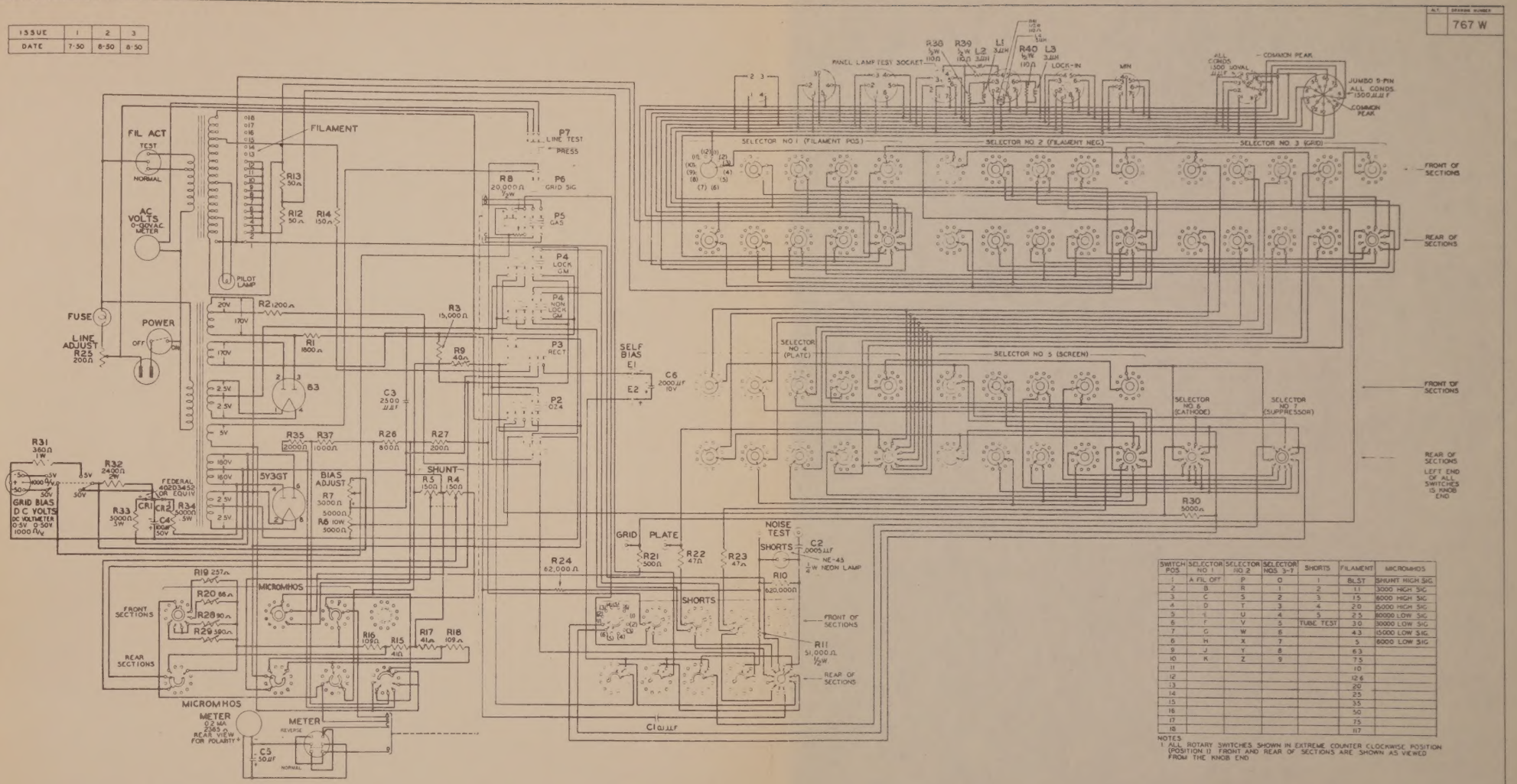
TUBE TYPE	First Selector	Neon lamp should light in these positions.							
B9M15822	B			T					
	E					V			
	G							X	Y
B9M16067	J	R		T		V	W	X	
B9M16275	B			T	U	V	W	X	Y
B9M16534	J	R		T		V	W	X	
B9M17571	H	R		T					
	J				U	V		X	
B9M18941	B		S	T					
	E					V			
	G							X	Y
17A470303	J	R	S			V			
	D				U				
	G							X	
17A485459	J	R	S				W		
	D				U				
TBR102D	B		S	T	U	V			
	G							X	Y
TBR103D	B		S		U	V			
	G							X	Y
TBR104D	B		S	T	U	V			
	G							X	Y
397021	B		S	T					
397022	E					V	W		
397023	J							X	
397036	C					V			
407100	J	R	S			V			
408100	J	R	S			V			
	D				U				
SW507300	J	R		T		V	W	X	
571606	B		S	T					
	E					V	W		
	J							X	

PARTS LIST FOR MODEL KS-15560-L1 TUBE TESTER

Item No.	Our Part No.	Description	Quan.	Source	Makers Part No.
1	2490-150	Booklet-instruction	1	The Colorcraft Corp.	
2	2920-7	Button-push, black	6	Gee-Lar Corp.	
3	2920-8	Button-push, red	2	Gee-Lar Corp.	
4	3145-149	Cabinet, portable wood, leatherette covered	1		
5	3105-24	Capacitor 0.1 mfd "C1"	1	Cornell-Dubilier	ZB-4027D
6	3095-8	Capacitor .00047 mfd "C2"	1	Cornell-Dubilier	
7	3095-41	Capacitor .0027 mfd "C3"	1		
8	3085-44	Capacitor 100 mfd "C4"	1	Sprague	DEE
9	3085-45	Capacitor 50 mfd. "C5"	1	Sprague	DEE
10	3085-43	Capacitor 200 mfd "C6"	1	Sprague	
11	3095-50	Capacitor 1500 mmf.	12	Elec. Reactance	HQ
12	3200-41	Chart-roll, tube test data	1	Gilkey Printing Co.	
13	3675-7	Cord-line, A.C.	1		
14	10300-1	Jack-pin, red	1	Hugh Eby	52
15	10300-2	Jack-pin, black	3	High Eby	52
16	11500-11	Knob-Ass'y. with pointer	3	Hickok Elec. Inst. Co.	11500-11
17	12270-1	Lamp-neon 1/4 watt	1	General Electric	NE-45
18	12270-2	Lamp-auto	1	Tung-Sol	81
19	12270-12	Lamp--6-8 volts .15 amp	1	General Electric	47
20	12450-145	Lead-assembly "Std. Grid"	2	Hickok Elec. Inst. Co.	12450-145
21	440-434	Meter-Transconductance	1	Hickok Elec. Inst. Co.	440-434
22	560-222	Meter-voltmeter, grid	1	Hickok Elec. Inst. Co.	560-222
23	570-061	Meter-S57M voltmeter	1	Hickok Elec. Inst. Co.	570-061
24	18575-12	Resistor "R1" 1800 ohms	1	Ohmite Mfg. Co.	1377-2A
25	18422-122	Resistor "R2" 1200 ohms	1	Allen-Bradley	
26	18423-151	Resistor "R3" 15,000 ohms	1	Allen-Bradley	
27	16925-90	Potentiometer "R4-R5" 150 ohms	1	P.R. Mallory	MM150P
28	18575-101	Resistor "R6" 10,000 ohms	1	International Resistance Co.	ABA
29	16925-63	Potentiometer "R7" 3000 ohms	1	P.R. Mallory	M3MPX
30	18413-201	Resistor "R8" 20,000 ohms	1	Allen-Bradley	
31	18670-412	Resistor-spool "R9" 48 ohms	1	Hickok Elec. Inst. Co.	18670-412
32	18414-621	Resistor "R10" 620,000 ohms	1	Allen-Bradley	
33	18413-511	Resistor "R11" 51,000 ohms	1	Allen-Bradley	
34	18575-19	Resistor "R12-R13" 100 ohms	1		
35	18670-418	Resistor-spool "R14" 150 ohms	1	Hickok Elec. Inst. Co.	18670-418
36	18679-90	Resistor-spool "R15-R16, R17-R18" 41-109 ohms	2	Hickok Elec. Inst. Co.	18679-90
37	18670-421	Resistor-spool "R19" 257 ohms	1	Hickok Elec. Inst. Co.	18670-421
38	18670-414	Resistor-spool "R20" 56 ohms	1	Hickok Elec. Inst. Co.	18670-414
39	18411-471	Resistor "R21" 470 ohms	1	Allen-Bradley	
40	18410-472	Resistor "R22-R23" 47 ohms	2	Allen-Bradley	
41	18413-621	Resistor "R24" 62,000 ohms	1	Allen-Bradley	
42	18750-2	Rheostat "R25" 200 ohms	1	Ohmite Mfg.	2878-3SC
43	18679-78	Resistor-spool "R26-R27" 800-200 ohms	1	Hickok Elec. Inst. Co.	18679-78
44	18679-95	Resistor-spool "R28-R29" 105-615 ohms	1	Hickok Elec. Inst. Co.	18679-95
45	18412-511	Resistor "R30" 5100 ohms	1	Allen-Bradley	
46	18421-361	Resistor "R31" 360 ohms	1	Allen-Bradley	
47	18432-241	Resistor "R32" 2400 ohms	1	Allen-Bradley	
48	18575-100	Resistor "R33-R34" 5000 ohms	2	Sprague	5KT
49	18670-132	Resistor-spool "R35" 2000 ohms	1	Hickok Elec. Inst. Co.	18670-132
50	18670-127	Resistor-spool "R37" 1000 ohms	1	Hickok Elec. Inst. Co.	18670-127
51	18411-111	Resistor "R38-R39-R40-R41" 110 ohms	4	Allen-Bradley	
52	18150-17	Rectifier "CR1-CR2"	2	Federal	402D3452
53	19350-1	Socket-bayonet	1	Drake Mfg. Co.	614L-CH-LT

PARTS LIST FOR MODEL KS-15560-L1 TUBE TESTER

Item No.	Our Part No.	Description	Quan.	Source	Makers Part No.
54	19350-2	Socket-candelabra	1	Drake Mfg. Co.	414-14L
55	19350-58	Socket- 9-pin noval	1	Cinch Mfg. Co.	53F12884
56	19350-76	Socket- 7-pin miniature	1	American Phenolic	147-170-24
57	19350-77	Socket- 8-pin	1	American Phenolic	77-M1P-8
58	19350-78	Socket- 4-pin black	1	American Phenolic	77-M1P-4
59	19350-93	Socket- 4-pin	1	American Phenolic	S-4
60	19350-94	Socket- 5-pin	1	American Phenolic	S-5
61	19350-95	Socket- 6-pin	1	American Phenolic	S-6
62	19350-96	Socket- 7-pin	1	American Phenolic	78-7CD
63	19350-97	Socket- loktal	1	American Phenolic	78-8L
64	19350-112	Socket-assembly (Panel light)	1	Drake Mfg. Co.	40
65	19350-129	Socket- 8-pin	1	Cinch Mfg. Co.	
66	19350-135	Socket- jumbo noval	1	Western Electric Co.	KS-13976
67	19910-61	Switch-gang P.B. 8 buttons	1	Oak Mfg. Co.	44983-130
68	19911-7	Switch-slide D.P.D.T.	1	Oak Mfg. Co.	16743-78
69	19911-9	Switch-toggle S.P.S.T.	1	Arrow Hart & Hegemann	20994-DA
70	19911-16	Switch-toggle D.P.D.T.	1	Arrow Hart & Hegemann	
71	19911-19	Switch-S.P.D.T. (Cath.Act.)	1	Arrow Hart & Hegemann	21350
72	19912-175	Switch-short test	1	Oak Mfg. Co.	12782-H5
73	19912-176	Switch-cathode	2	P.R. Mallory	
74	19912-177	Switch-selector	5	Oak Mfg. Co.	31595-H5
75	19912-178	Switch-filament	1	Oak Mfg. Co.	34735-L2
76	19912-201	Switch-micromho	1	Oak Mfg. Co.	
77	20800-69	Transformer-plate	1	Transformer Eng. Co.	
78	20800-103	Transformer-filament	1	Transformer Eng. Co.	
79	20875-6	Tube-vacuum	1	RCA Mfg.	5Y3GT/G
80	20875-28	Tube-vacuum	1	RCA Mfg.	83



SWITCH POS	SELECTOR NO 1	SELECTOR NO 2	SELECTOR NOS 3-7	SHORTS	FILAMENT	MICROMHOS
1	A FIL OFF	P	0	1	BLST	SHUNT HIGH SIG
2	B	R	1	2	1.1	3000 HIGH SIG
3	C	S	2	3	1.5	8000 HIGH SIG
4	D	T	3	4	2.0	15000 HIGH SIG
5	E	U	4	5	2.5	80000 LOW SIG
6	F	V	5	TUBE TEST	3.0	30000 LOW SIG
7	G	W	6		4.3	15000 LOW SIG
8	H	X	7		5	6000 LOW SIG
9	J	Y	8		6.3	
10	K	Z	9		7.5	
11					10	
12					12.6	
13					20	
14					25	
15					35	
16					50	
17					75	
18					117	

NOTES
1 ALL ROTARY SWITCHES SHOWN IN EXTREME COUNTER CLOCKWISE POSITION (POSITION 1) FRONT AND REAR OF SECTIONS ARE SHOWN AS VIEWED FROM THE KNOB END

MODEL KS-15560-L1 TUBE TESTER
SCHEMATIC WIRING DIAGRAM — BELL LABS
DRAWN | CHECKED | APPROVED | DATE 1-31-36
767 W

Schematic Drawing of Model KS-15560-L1 Vacuum Tube Tester

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